

Blue Spruce Engraver

An important pest of ornamental blue spruce

Name and Description—*Ips hunteri* Swaine [Coleoptera: Curculionidae: Scolytinae]

The blue spruce engraver is a common bark beetle of Colorado blue spruce. The insect has become a problem in ornamental plantings of Colorado blue spruce along the Front Range of Colorado and southeastern Wyoming. In some forested situations, the blue spruce engraver can be found infesting the tops of Colorado blue spruce trees killed by the spruce beetle, *Dendroctonus rufipennis*. The beetle is approximately 1/8-1/4 inch (3-4 mm) long. The larva is a C-shaped, legless grub.

Host—Colorado blue spruce, *Picea pungens*, appears to be the only confirmed host for *Ips hunteri*, although Engelmann spruce, *Picea engelmannii*, is also listed as a host. This bark beetle has been recorded in Arizona, Colorado, Utah, and Wyoming.

Life Cycle—The blue spruce engraver has at least two generations per year. The biology of the blue spruce engraver is not known in any detail. Beetle flight is thought to begin in early spring along Colorado's Front Range.

Damage—The blue spruce engraver attacks weakened trees and windthrown trees. In urban plantings, however, the beetle infests the tops of drought stressed trees and progressively kills the trees over several years and multiple generations (fig. 1). The egg gallery (fig. 2) generally consists of two branches extending in opposite directions, and it may be diagonal, transverse, longitudinal, or curved. The beetle is occasionally seen killing Colorado blue spruce in forested situations (fig. 3).

Management—Homeowners should maintain adequate soil moisture levels for their Colorado blue spruce throughout the entire year with a regular watering schedule. Injury and additional stresses, such as construction activities that damage the root systems of the trees, should be avoided.

Ornamental plantings of Colorado blue spruce that have been top-killed by the blue spruce engraver should be removed because the trees generally decline quickly and contribute to the abundance of beetles in the area. In addition, stand sanitation and removal of windthrown branches can circumvent an increase in beetle populations. Protective insecticide sprays have been used successfully to prevent infestation; treatment should be completed by April along Colorado's Front Range.



Figure 1. Blue spruce that has been top-killed by the blue spruce engraver, *Ips hunteri*. Photo: William M. Ciesla, Forest Health Management International, Bugwood.org.

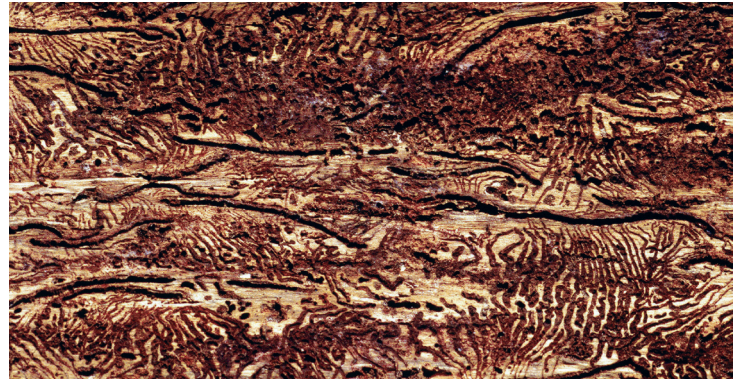


Figure 2. Egg galleries of the blue spruce engraver. Photo: Whitney Cranshaw, Colorado State University, Bugwood.org.

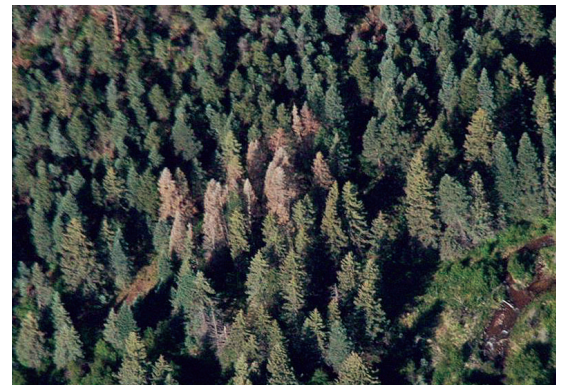


Figure 3. Aerial view of blue spruce engraver mortality. Photo: William M. Ciesla, Forest Health Management International, Bugwood.org.

1. Cranshaw, W.S.; Leatherman, D.A.; Jacobi, W.R.; Mannix L. 2000. Insects and diseases of woody plants of the central Rockies. Bulletin 506A. Fort Collins, CO: Colorado State University, Cooperative Extension. 284 p.
2. Wood, S.L. 1982. The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. Great Basin Naturalist Memoir 6. 1359 p.